

Claims

1. Process for drying of boats, with hulls consisting of wood and/or plastic materials, especially polyester materials, characterized by the following process steps:

- g. Cleaning of the boat shell (2) outside and inside,
- h. Damage analysis with measurement of the moisture and/or temperature of the material of the boat shell (2) in spots or with blanket coverage in the initial state,
- i. Removing a paint or other protective layer which may be present on the boat shell (2),
- j. Attaching a reflection layer (3) to the inside of the boat shell (2),
- k. Computing the optimum drying process and drying of the boat hull (1) by placing one or more microwave drying devices (4) in the area of the boat shell (2) to be dried, the boat shell (2) being exactly located and irradiated with microwave energy in doses,
- l. Running measurement and monitoring of the temperature and moisture of the material and microwave radiation at the operating site of the microwave drying device (4) during the drying process until material-specific residual moisture values are reached.

2. Process as claimed in claim 1, wherein especially in cases of sea water damage, water saturation of parts or areas of the interior is prevented or eliminated by advantageous measures such as removing the water by suction, ventilation and condensation drying, before drying of the boat hull (1) is carried out.

3. Process as claimed in claim 1, wherein the reflection layer (3) consists of a self-adhesive, aluminum-coated plastic film which is applied to the inside of the boat shell (2).

4. Process as claimed in claim 1, wherein the moisture and/or temperature of the material of the boat shell (2) is measured at points or with blanket coverage, with or without contact.

5. Process as claimed in claim 1, wherein the microwave drying device (4) consists essentially of a magnetron and an antenna (6), the high-frequency electromagnetic waves produced in the magnetron being emitted by a funnel-shaped antenna (6) onto the boat shell (2).

6. Process as claimed in claim 1 and 5, wherein the microwave power and/or the working frequency of the magnetron are constant or adjustable.

7. Process as claimed in claim 1, 5 and 6, wherein during the drying process relative motion between the microwave drying devices (4) and boat hull (1) is furthermore accomplished as desired.

8. Process as claimed in claim 1, wherein the operating time of the microwave drying devices (4) depends on the completed damage analysis in time cycles, and the operating time should not exceed a boundary value per time cycle.

9. Process as claimed in claim 1 and 8, wherein the boundary value for the operating time is 10 minutes.

10. Process as claimed in claim 1, 8, and 9, wherein after each cycle of operating time the temperature of the material of the boat shell (2) is measured and it is ensured that it does not exceed a material-specific boundary value.

11. Process as claimed in claim 1, 8 to 10, wherein the boundary value for the temperature in boat shells (2) of polyester materials is 60°C.

12. Process as claimed in claim 1, 8 to 11, wherein the boat shell (2) is loaded with a maximum microwave radiation of 5 mW/cm².

13. Process as claimed in claim 1, wherein the drying process is ended at a residual moisture content value of a maximum 5% moisture.

14. Process as claimed in claim 1, wherein after completion of the drying process of the boat hull (1) it is sealed.

15. Process as claimed in claim 1 and 14, wherein sealing takes place in a pressurized spraying process using epoxy resins.

16. Process as claimed in claim 1 and one or more of the following claims, wherein after completion of the drying process of the boat hull (1) a measurement record of all measured values is prepared.